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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,277	06/27/2003	Christof Kindervater	HOE-492.1	8511
20028	7590	09/27/2006	EXAMINER	
Lipsitz & McAllister, LLC			AFTERGUT, JEFF H	
755 MAIN STREET			ART UNIT	
MONROE, CT 06468			PAPER NUMBER	

1733

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/608,277

Applicant(s)

KINDERVATER, CHRISTOF

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 35-99 is/are pending in the application.
- 4a) Of the above claim(s) 36-41, 79-92 and 98 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 43-45, 73-75, 93-97 and 99 is/are allowed.
- 6) ☒ Claim(s) 35, 42, 46-72 and 76-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9-29-03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

***Election/Restrictions***

1. Claims 36-41, 79-92 and 98 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4-7-06.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 35, 46, 47, 63-71, and 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petzelka et al taken with Wilson et al, Satoh et al and any one of Benkoczy, Kuch et al, Hanson or French Patent 2516859 for the same reasons as expressed in paragraph 4 of the Office action dated 5-8-06.

4. Claims 42 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with any one of Uchida, Pearce or Aldrich et al for the same reasons as expressed in paragraph 5 of the Office action dated 5-8-06.

5. Claims 48-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with any one of Stephens, Fairbairn or French Patent 2,525,962 for the same reasons as expressed in paragraph 6 of the Office action dated 5-8-06.

6. Claims 58-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 5 further taken with any one of

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Goldsworthy, Yu et al , Miller or Zackrisson et al for the same reasons as expressed in paragraph 7 of the Office action dated 5-8-06.

***Allowable Subject Matter***

7. Claims 43-45, 73-75, 93-97 and 99 allowed.

***Response to Arguments***

8. Applicant's arguments filed 8-11-06 have been fully considered but they are not persuasive.

The applicant essentially argues that the prior art combination presented: (1) failed to teach each and every limitation in the claims in that it failed to teach the use of a single winding procedure to produce the energy absorbing structure and that the prior art additionally failed to teach that those skilled in the art would have formed an energy absorbing structure which had a layers structure causing the forces to be absorbed by the hollow body without folding in such a manner that the forces generate cracks in the layered structure at the first end of the hollow body which extend in a direction parallel to the axis and which prorogate from the first end toward the second end, and; (2) it is only with hindsight that one skilled in the art would have combined the seven references to arrive at the claimed invention. These arguments have not been found to be persuasive and are respectfully traversed below.

As an initial point, applicant is advised that one cannot show non-obviousness by attacking references individually where combinations of references have been made against the claims but rather the prior art as a whole must be considered for what it would have fairly taught and/or suggested to those having ordinary skill in the art.

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Additionally, applicant is advised that the rejection of claim 35 as presented is not a combination of seven references as purported by applicant but it is rather a combination of four references where the references to any one of Benkoczy, Kuch et al, Hanson or French Patent 2516859 were used in the alternative. That said, it is agreed that the reference to Petzelka, who is making an energy absorbing hollow element, does not teach a winding of a flat material but rather is performing a filament winding operation where a filamentary material is traversed back and forth along a mandrel to form the energy absorbing hollow element. The applicant is advised, however, that the reference clearly envisioned the formation of an energy absorbing hollow component wherein the thickness of the hollow component varied along its length (see Figure 4 for example) while it is correct that the reference taught that the assembly was formed via a filament winding operation, the use of a single winding step to form the hollow assembly as an alternative to filament winding was suggested by the reference to Wilson et al. Wilson was forming an energy absorbing device and clearly expressed that filament winding (the processing of Petzelka) or winding a flat sheet material (as in a single winding procedure) were art recognized alternative forming techniques for composite energy absorbing hollow structures. Clearly, one skilled in the art would have recognized how to wind a flat sheet of material to provide thicker portions in the finished assembly in a single winding procedure. The references to any one of Benkoczy, Kuch et al, Hanson or French Patent 2516859 clearly envisioned that one skilled in the art would of winding a sheet material in a single winding operation would have known how to wind a single sheet of flat material in order to obtain a composite hollow element which included

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portions therein of varied thickness (which is what one would have desired for the energy absorbing device as evidenced by Petzelka). The reference to Satoh suggested that one skilled in the art of energy absorbing devices would have understood the known use of a "triggering" chamfered configuration and additionally that it would have been desirable to design the composite component to avoid bucking therein. Clearly, in the art of making a composite energy absorbing component one skilled in the art would have understood how to utilize a single winding procedure to obtain the specified structure in light of the prior art. Applicant is advised that where, as here, two equivalents were known for the same desired function an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious, In re Fout, 213 USPQ 532, In re Siebentritt, 152 USPQ 618.

Regarding the lack of a teaching of an energy absorbing structure which had a layers structure causing the forces to be absorbed by the hollow body without folding in such a manner that the forces generate cracks in the layered structure at the first end of the hollow body which extend in a direction parallel to the axis and which propagate from the first end toward the second end, the applicant is advised that the prior art references while not expressing the resulting properties of the finished assembly when subjected to forces therein, suggested the formation of an identical end product formed via a single winding procedure. As such, it is deemed that the end product would have necessarily had the resulting properties when exposed to a crash (the forces) where energy absorption was required as structurally the prior art suggested the formation of an identical end product. Merely because the references did not expressly state that the

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end product had the specified properties does not make the process of making the product patentable as one skilled in the art viewing the prior art would have been led to practice the claimed process and arrived at the same or substantially the same end product. It should be noted that Satoh suggested the specified arrangement wherein there was buckling of the assembly. Additionally the reference suggested the same "triggering" mechanism.

Regarding the question of hindsight, the applicant is advised that as addressed above there were specific reasons for making the identified combination. While the references to any one of Benkoczy, Kuch et al, Hanson or French Patent 2516859 were not specifically related to manufacturing an energy absorbing device, they each clearly suggested that those skilled in the art of composite manufacture would have known how to wind a single sheet of flat material in order to form a hollow composite article wherein the same included a region in the finished assembly which had a greater thickness. One skilled in the art would have been led to look to these references as the reference to Wilson suggested such single layer of flat material winding techniques for formation of the energy absorbing devices and the reference to Petzelka suggested that those versed in the art would have desired to form an energy absorbing device with the regions of increased thickness in order to provide the energy absorbing device with the desired properties. As noted above, where there are express reasons for making the combination it cannot be seen how hindsight was involved in making the combination.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jeff H. Aftergut  
Primary Examiner  
Art Unit 1733

JHA  
September 22, 2006